FSPG Working Group Worksheet

- **Topic**: COMBAT ENGINEER BATTALION (CEB) RESTRUCTURING

- **Issue**: Reorganize and focus the Combat Engineer Battalion for and on the missions that are critical to successful implementation of OMFTS: mobility, countermobility, and limited survivability support to the Marine Division. Implicit in this charge is the recognition of a need for mobility within the Combat Engineer Battalion commensurate with the maneuver units it supports. Additionally, this reorganization will centralize all mobility assets, GRIZZLY and AVLB (upon the fielding of GRIZZLY), in the Combat Engineer Battalion, thereby giving the process owner all the necessary tools to best support the MAGTF.

  - Guidance: Draft OMFTS working group final report recommendation for consolidation and elimination of redundancies.

  - Background/Discussion:

    - Tasked with the preservation of the tactical mobility of maneuver forces in the battlespace, the Combat Engineer Battalion (CEB) must have a light, flexible organization, with a wide range of modern capabilities. At present the CEB is limited in its ability to accomplish this mission for several reasons. Those reasons are discussed in detail in the section below titled "capability deficiency." The CEB has substantially increased major end items in response to increased day to day general engineer requirements. According to CNA analysis, engineer equipment totals grew 100% between 1988 (Total TAMS 6,620) to 1998 (Total TAMS 13,204). Historically, Department of Defense (DOD) procurement strategy has revolved around strategic defense concepts (e.g. Fulda Gap) that have focused on acquiring heavy counter-mobility and survivability assets vice mobility assets. As an example, mine detection techniques and equipment used on the beaches of Normandy are still in use today--hand held metallic mine detectors, bangalore torpedoes, probes). Currently, the CEB is equipped, staffed and tasked with accomplishing a general engineer mission that should rightfully be assigned to the heavier Engineer Support Battalion and Naval Construction Battalion. This gradual mission creep away from a mobility focus has hindered the Combat Engineer Battalions' ability to keep pace with the maneuver forces on the battlefield.

    - Combat Engineer Battalions' inadequate capability to maneuver with the ground combat element is well documented in the Final Report, Mission Area Analysis (MAA) of Mission Area 26-Engineering (1995-2005). The report points out that engineer equipment for CEB was not designed to keep pace with rapidly moving forces, nor was this equipment designed to protect the operators. Over the years, CEB has been forced to support a highly mobile battlefield with slow, cumbersome, commercial style equipment. The HMMWV and 900 series dump truck have been the two principal mobility vehicles. CEB engineers are forced to piggyback with AAV and LAV units to

reach proposed breach sites, minefields and other battlefield obstacles. Countermine equipment, wet/dry gap crossing equipment and proposed breaching equipment has routinely been located in units other than the engineers. To enhance mobility, counter-mobility, and limited survivability through close combat engineer support to elements of the Marine Division, this trend must be changed and mobility must be returned to CEB.

- Capability Deficiency:
  - Inadequate organic mobility
  - Even w/attached mobility assets, CEB is too heavy to maneuver w/infantry
  - Loss of mission focus
  - Significant general engineer support capability has evolved
  - Giant footprint counter to OMFTS principles
  - No approved T/O mission statement for CEB exists
  - No inherently mine-resistant vehicle
- Capability Desired:
  - Adequate organic mobility
  - Highly maneuverable assets/subordinate units
  - Focused on mobility, counter-mobility, limited survivability capability
  - Reduced footprint, eliminate general engineer support assets
  - Mine resistant engineer squad vehicle (see FONS and MNS)
  - Agile organization well suited to incorporate/employ assets necessary to enhance OMFTS.

➢ **Current Organization**:

- Mission / Tasks: Provide mobility, countermobility, survivability, and general engineer support to the Marine Division.
- Capability: Limited mobility, countermobility, survivability, and general engineer support (mobile electric power, water production, and refrigeration).
- Structure: See attached T/O's 1378C, 1377C, 1375C, 1363C and T/E's N1310, N1311, N1313, N1312.

- **Proposed Change**:
  - Mission/Tasks: To enhance mobility, counter-mobility, and limited survivability through close combat engineer support to elements of the Marine Division in combat operations.
    - Conduct engineer reconnaissance in support of division's intelligence collection plan.
    - Plan, organize, and construct obstacle barrier plans in support of the MAGTF scheme of maneuver.
    - Plan, organize, and conduct assault-breaching operations in support of the MAGTF scheme of maneuver.
    - Improve existing terrain for use as helicopter terminal points.
    - Conduct demolition operations beyond the ability of other division units.
    - Reinforce assault capability of other division units.
    - Breach explosive and non-explosive obstacles from the craft landing zone inland.
    - Employ assault bridging when augmented.
    - Provide breaching capability in support of the mobility of tracked and wheeled vehicles.
  - Preliminary Concept of Employment: Consolidate Headquarters and Service Company and Engineer Support Company. Eliminate utility personnel and equipment beyond requisite organic support. Mobile Electric Power (MEP) support for Division Command Post moved to Headquarters Battalion, Marine Division. This re-organization will allow Combat Engineer Battalion to focus on its primary missions and achieve comparable mobility with supported units.
  - Desired Capability.
    - Adequate organic mobility
    - Highly maneuverable assets/subordinate units
    - Focused on mobility, counter-mobility, limited survivability capability
    - Reduced footprint, eliminate general engineer support assets
    - Mine resistant engineer squad vehicle (see attached FONS and MNS)

- Agile organization well suited to incorporate/employ assets necessary to enhance OMFTS

❖ Structure/Individual MOS Impacts: In summary, the total saving per battalion is 2 OFF/ 65 ENL (total for two battalions 4 OFF/ 130 ENL). A new T/O for the two active duty CEB's is attached. This change is also applicable to the Marine Reserve CEB. Reserve T/O's are attached with the highlighted recommendations. Structure saving for the Reserve CEB is 2 OFF/ 65 ENL. Differences between the active duty and reserve battalions are few and will be discussed below. The recommended organizational changes are as follows:

- Engineer Support Company: Rename Headquarters and Support Company.

  › Adjust T/O to reflect Major (1302) as company commander and Captain (1302) as company XO.

  › Track section: Reduce (3) equip operators (MOS 1345)

  › Rubber tire section: Reduce (4) equip operators (MOS 1345)

  › Mechanized Breaching Platoon: This platoon consolidates division mobility assets and includes the Combat Breacher Vehicle (CBV) (informally known as the Grizzly). Two CBVs will be organized into a CBV section, and six CBV Sections will be organized into the Mechanized Breaching Platoon. The proposed Marine Corps Operational and Organizational (O&O) Concept recommended a structure of 1 OFF/27 ENL for the CBV. However, the CBV is being procured without additional structure. Structure has been made available within this reorganization/consolidation. In addition to the CBV, the AVLB (internal GCE migration from Tank Battalion of equipment and associated 8 personnel) has been added to this platoon with a structure of 8 ENL for a total 1 OFF/35 ENL. Migration of the AVLB applies only to the active duty battalions. Location of the reserve tanks prevents this change for the reserve CEB. IOC for the CBV is scheduled for the 2nd quarter FY05. Migration of the AVLB and 8 ENL personnel from Tank Battalion should occur with the fielding of the CBV. The following is the recommended organization/structure of the Mechanized Breaching Platoon:

Plt Headquarters		
Plt Commander (Cmdr)	1st Lieutenant	1302
1 Marine Officer		
Plt Sergeant (Sgt)	Gunnery Sgt	1349
1 Marine Enlisted		
Maintenance Chief	Staff Sgt	1345
1 Marine Enlisted		
Driver	Private-Lance Corporal	1371
1 Marine Enlisted		

CBV Section (6 Sections/2CBV each)

Section Leader	Sgt	1345
6 Marine Enlisted		
Vehicle Cmdr	Corporal	1345
6 Marine enlisted		
Crewman	Private	1345
12 Marine Enlisted		

AVLB Section

Section Leader	SSgt	1345
1 Marine Enlisted		
Aslt Bridge Commander	Sgt	1345
3 Marine Enlisted		
Aslt Bridge Crew	Corporal	1345
3 Marine Enlisted		
Aslt Bridge Crewman	Private-Lance Corporal	1345
1 Marine Enlisted		

Platoon Total: 1 Officer/35 Enlisted

- Dump truck Section: Eliminate entire section--29 operators (MOS 3531).
- Construction Equipment Section: Eliminate entire section--2 SSgt (MOS 1345).
- Heavy Vehicle Section: Leave 16 of 29 from Dump Truck Section as operators (MOS 3531) to support additional MTVRS or D1059.
- Crane Section: Eliminate entire section—9 operators (MOS 1345).
- Tractor-trailer Section: Leave 5 of 29 from Dump Truck Section as operators (MOS 3533) to support transportation/distribution of blade assets. As a clarifying note, the Dump Truck Section of 29 Marines has been used internally to provide 16 MTVR or D1059 requirement and 5 operators for Tractor-trailer Section requirement for a total of 21 (21 of 29). There is no requirement for additional vehicles LVS. These vehicles are currently identified on the CEB T/E N1310 as planned allowances.
- Utilities Platoon: Eliminate entire platoon, less generator requirements in communication platoon. Reduce 1 OFF/ 83 ENL. This change implies that FSSG will assume all second through fourth echelon maintenance support and acquire requisite structure. In addition, 15 enlisted Marines from this platoon must be placed in HQ BN, Marine Division to augment Mobile Electric Power (MEP) equipment—T/O: 1362C, Line No.102 through 110. The utility equipment to be migrated to H&S Company, HQ BN (mostly mobile electric power) is identified on the CEB T/E N1310

and the attached equipment list. This change applies to the reserve battalion.

› Engineer Equipment Platoon: CBV maintenance will be organized within the Maintenance Section of the Engineer Equipment Platoon. The proposed Marine Corps Operational and Organizational (O&O) Concept recommended a structure of 11 ENL for CBV maintenance. There are 4 ENL billets (with proper MOS) within CEB to fill part of this requirement. The remaining 7 ENL Marines will be filled from internal CEB structure. Since there will be no AVLB in the reserve CEB, the reserve Maintenance Section will require an additional 5 ENL (1-2171 and 4-2146). The following is the recommended organization/structure for the CBV Maintenance Section:

Maintenance Section: (Add to Engineer Equipment Platoon)

Vehicle Mechanic Lance	Corporal-Sgt	2146
6 Marine Enlisted		
Electro-Optical Systems	Cpl	2171
1 Marine Enlisted		

Section Total: 0 Off/ 7 Enl

- Headquarters and Service Company: Deactivate this company—structure, less company headquarters, moves to Headquarters and Support Company.

  › Communications Platoon: Retain 4 generator operators (MOS 1141) and add 1 electrical repair (MOS 1142).

  › Construction Section: Eliminate entire section (7 carpenters MOS 1371).

  › Company Headquarters: Disband and move structure to Headquarters and Support Company.

- Headquarters and Service Company, Tank Battalion: Recommendation is to move the AVLB to the new Headquarters and Support Company, CEB (migrate only when the CVB is fielded). This applies to active duty structure only. Convert MOS 1812 structure to MOS 1345 structure to reside in CEB. Delete TAM's E0149 (6) and E0150 (4) and the following structure from:

  T/O: 4237G H&S Company, Tank Battalion and T/E: N1511 N1521

  Line No. 85 AVLB Section

AVLB Section Leader	SSgt	MOS 1812
ASLT Bridge Cmdr	Sgt	MOS 1812
ASLT Bridge Crewman	Cpl	MOS 1812
ASLT Bridge Crewman	Cpl	MOS 1812

- Combat Engineer Company: Change T/E to reduce number of HMMWVs in the company by ten (10), leaving five (5). Add three (3) MVTRs or D1059s.

- Summary of T/E Changes: The majority of T/E deletions removed non-core functions out of the battalion to the FSSG. Decreases of selected T/E items focused on duplicative capabilities and redundancies. Care was exercised to strike a balance between duplication and flexibility to ensure the battalion will be able to conduct a wide range of tasks. Increases of selected T/E items will enhance mobility and put needed lift back into the existing battalion structure. The equipment list below applies to both active and reserve battalions. The following is a listing of the significant T/E changes to the new Combat Engineer Battalion:

DELETED QUANTITIES/TAM/NOMENCLATURE

-6 B0055 BATH UNIT
-2 B0446 CRANE, RT
-2 B0591 EXCAVATOR
-2 B0805 DISTRIBUTION SYTEM, 100 KW
-6 B1021 GENERATOR, 60 KW
-2 B1045 GENERATOR, 100 KW
-42 B1220 KIT ASSAULT
-56 B2130 TANK, FAB, 3000 GAL
-5 B2462 TRACTOR, D7G
-4 B2504 ROWPU
-18 D1072 TRK, DUMP 5 TN

NEW OR INCREASED QUANTITIES/TAM/NOMENCLATURE

+2 B2460 TRACTOR W/ BLADE
+12 BXXX CBV/GRIZZLY
+16 D0198 MTVR (or D1059)*
+2 D0235 SEMI-TRLR 40T*
+2 D0878 5TH WHEEL*
+16 D1059 TRK 5 TON (or D0198)*
+6 E0149 AVLB (active duty only)
+4 E0150 LAUNCHER, M60

*NOTE: MIGRATE TWO DO235, TWO D0878, AND SIXTEEN D1059/D0198 FROM T/E N2101 AND N2201, HQ BATTERY, 10TH/11TH MAR.

➢ **Does Proposal Advance OMFTS Capability**? Yes.

- ❖ CEB is lighter.
- ❖ Increases CEB's mobility.

- ❖ Eliminates redundancy between Combat Engineer Battalion, Engineer Support Battalion and Naval Construction Battalion.
- ❖ Reduces logistical footprint.
- ❖ Flattens organization by combining Headquarters & Service and Engineer Support Company.
- ❖ Focuses assets to better enable battlespace mobility for maneuver units.

➢ **Other MAGTF Element WG Impacts/Position of Other WGs**: None.

➢ **Preliminary DOTES Assessment**:

- ❖ Doctrine: Will require minor changes in CSS and engineer doctrine.
- ❖ Organization: Headquarters & Service Company and Engineer Support Battalion have been merged into one unit—Headquarters and Support Company. Minor changes to Platoons and Sections have been made within the new Headquarters and Support Company to reflect the introduction of the GRIZZLY and the migration of the AVLB.
- ❖ Training and Education: No impact.
- ❖ Equipment: The attached list of engineer and motor transport has been identified. Instead of transferring this equipment to the FSSG, the Marine Corps should review all excess and begin to divest of this equipment.
- ❖ Support and Facilities: HQMC (I&L) has been tasked to conduct a facilities study. It is believed that Combat Engineer Battalion can support the CVB with either minor construction or MILCON. This study should take into consideration the reduction of general engineer equipment within CEB that will free maintenance space within current facilities.

➢ **Overall Assessment**:

- ❖ Pros:
  - ▪ Moves non-core capabilities to appropriate organizations and units.
  - ▪ Focuses on primary missions.
  - ▪ T/E changes provide for battlefield mobility.
  - ▪ Reduces wheeled vehicles while increasing overall CEB mobility.
- ❖ Cons:

- Increased external coordination requirements with Engineer Support Battalion, FSSG by eliminating general engineer (utility) support and reducing heavy survivability support.

- Success hinges upon centralization of mobility assets in CEB, e.g. GRIZZLY, AVLB, and motor transport assets.

➢ **Preconditions for Implementation**: None:

➢ **Potential "External" Consequences** (risk):

❖ Political: None.

❖ OSD: None.

❖ CINC-Relevance: None.

➢ **Future FSPG Follow-on Requirements**? Review Engineer Support Battalion structure, mission and equipment.

❖ Maintenance resides in both the Engineer Equipment Platoon and the Motor Transport Platoon of the Headquarters and Support Company. To allow some continuity and testing, these two sections were not consolidated. Future improvements in maintenance and supply are on the horizon, but have not been through a thorough DOTES assessment for implementation. The future FSPG should review these two maintenance capabilities for possible consolidation.

❖ As a first step toward improving current capability and positioning for OMFTS, mobility assets have been returned to the CEB. However, to be truly capable of supporting offensive OMFTS operations, the combat engineers must possess the organic ability to project units forward in a hardened, survivable platform, capable of sustained operations at the operating speeds of the maneuver units. Future FSPG should review the status of the attached MNS for a future combat engineer vehicle. Fielding of the combat engineer vehicle will have implications on force structure and existing CEB mobility equipment adjustments to further improve capabilities and effectiveness in an OMFTS environment.

❖ There are three engineer "barons" within the Marine Corps (PP&O, I&L, ASL). The engineer community has approximately the same number of ideas/concepts about how to pull the community together and address many common concerns. Failure to pull the community together has resulted in stovepipes of capability and redundancies throughout the MEF. There is no balance or common thread of philosophy regarding engineer capabilities between Division, FSSG and Wing. This also appears to be the case with acquisition and procurement strategy. Rather, equipment is procured by each to fill day to day requirements as interpreted by each sponsor. The community needs a single voice and a single strategy to collectively balance the capabilities, strengths and weaknesses of all communities. In addition, a single strategy can leverage the capabilities that

reside in the Naval Construction Forces. The future FSPG should review this issue and strongly support a single voice concept if it has not been resolved.

- **QDR Impacts**? None.

- **Miscellaneous Historical Data**:

  - Documents Used:

    - MCDCC, Fleet Operational Need Statement for Engineer Squad Vehicle and Proposed Mission Need Statement dated March 1999

    - MCDCC, Adoption of the U.S. Army's Operational requirements Document (ORD) for the Breacher (GRIZZLY) dated 9 March 1999

    - OPNAV INSTRUCTION 3501.115C, Projected Operational Environment (POE) and Required Operational Capabilities (ROC) for the Naval Construction Force (NCF)

    - CNA (annotated briefing), Three versus Five Echelons of Maintenance, Phase One Assessment, dated 1999

    - Marine Corps, Final Report: Mission Area Analysis MA-44 Expeditionary Engineering dated May 1991

    - Final Report: Mission Area Analysis (MAA) of Mission Area 26 – Engineering (1995-2005) dated 20 Sep 1995

    - CNA: Logistics and Engineering Requirements for Humanitarian Assistance Operations dated Apr 96

    - Marine Corps, Mission Area Analysis (MAA) Tactical Lift Study, formalized by DC/S P&R Memorandum of 24 October 1997.

  - Briefs Received: None.

  - Papers: None.

  - SMEs Consulted:

    - Former Commanding Officer, CEB

    - Current Commanding Officer, CEB

    - Former MWSS Commanding Officer

    - Division Engineer Officer

    - FSSG Engineer Officer

- MARFORRES Engineer Officer

❖ Any General Observations: One mobility issue remains outstanding in the eyes of both the tank and engineer communities. This is the issue of migrating the AVLB assets from Tank Battalion to the Combat Engineer Battalion (4 launchers, 6 AVLB's and 8 enlisted Marines). From the point of view of the tanker, the AVLB was procured to provide an instride gap crossing capability for Tank Battalion. By placing the AVLB into the battalion, it is readily available for this primary task. Since the AVLB has resided in the Tank Battalion, there has been no known request to use the AVLB to provide gap crossing to any other GCE or MAGTF element. From the engineer view, the AVLB provides a means to correct a glaring deficiency within the engineer mission area—wet/dry gap crossing capability. If located in CEB, the AVLB would enhance the mobility of the entire GCE not just tanks. All mobility assets would be centralized with a single process owner. This is an old issue. From an objective point of view, the GCE is small enough that tasking CEB to provide Tank Battalion instride gap crossing capability would seem easy. On the other hand, it appears that tankers have a valid point about the use of the AVLB as a gap crossing capability for the remainder of the ground force. The 1995 MAA stated that the AVLB was insufficient for use as a gap crossing capability for the remaining ground forces because of its size and limited mobility. However, we do not use tanks independent of the remainder of the GCE, so why can't the AVLB be used to provide gap crossing to ground forces other than tanks? The Marine Corps may not be able to afford a lighter, more capable assault bridge in the near-term. The reorganization of CEB in this option includes the AVLB.

➢ **Attachments (HYPERLINKS)**

X CEB_FY02_MIG_ATCH.xls

X CEB_T-E 1310_ATCH.doc

X CEB_TMR_1362A_ATCH.doc

X CEB_TMR_1363B_ATCH.doc

X CEB_TMR_1363D_ATCH.doc

X CEB_TMR_1363E_ATCH.doc

X CEB_TMR_1363F_ATCH.doc

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FSPG Working Group Worksheet

- **Topic:** MARINE AVIATION CSS MIGRATION PLAN

- **Issue**: Airfield operations (in garrison and in current war plans) can be accomplished while simultaneously positioning Marine aviation for OMFTS and more efficiently supporting the MAGTF with engineering, motor transport, food services and military police (MP), by reorganizing MWSSs.

  - Guidance: The CMC Charter tasked the FSPG to look at the apparent duplication of CSS across the MAGTF. The OMFTS Working Group recommended that the FSPG reorganize and consolidate excess CSS capacity at the FSSG. There is no consensus at the flag level regarding aviation CSS consolidation.

  - Background/Discussion: The Marine Wing Support Squadron (MWSS) currently has a limited capability to build and maintain airfields, and a robust capability to operate airfields, both in garrison and in an expeditionary environment. In addition to aviation-unique functions, the MWSS performs functions duplicative of those resident in the Force Service Support Group (FSSG) and the Naval Mobile Construction Battalion (NMCB). There appear to be numerous organizational and functional efficiencies associated with the migration of current MWSS functions not directly related to airfield operations.

    - Capability Deficiency: There is no current deficiency. However, the combat organization which has served us well for forty years will not meet the demands of OMFTS or combat as we envision it in the twenty-first century. Across the MAGTF, engineering, motor transport, food services, military police and associated personnel can be provided as responsively as, and more effectively than, the current organization. More importantly, as we move to an OMFTS force, the MAGTF will be hampered if it maintains its current CSS organization.

    - Capability Desired: Airfield construction, engineer support, motor transport support, food services support and MP support equal to, or better than, that provided by the current MWSS organization. This includes the capability to improve and maintain airfields and associated infrastructure, e.g. road networks and drainage systems.

- **Current Organization:**

  - Mission /Tasks: The MWSS provides all essential AGS requirements to a designated fixed- or rotary-wing component of an Aviation Combat element (ACE) and all supporting or attached elements of the Marine Air Control Group (MACG).

    1. Internal Airfield Communications
    2. Weather Services
    3. Expeditionary airfield services

4. Crash/fire/rescue, and structural fire fighting services
5. Aircraft and ground refueling
6. Essential engineer services
7. Motor transport for operations internal to air base
8. Messing facilities
9. Routine and emergency sick call, and aviation medical functions
10. Individual and unit training of organic personnel and selected personnel of support units
11. Organic nuclear, biological and chemical defense
12. Security and law enforcement services
13. Airbase Commandant functions

- Capability: The MWSS is capable of constructing and maintaining small landing fields and operating airfields of nearly any size. Their resident capability is more than that required for peacetime, yet not sufficient for organic construction of airfields beyond helicopter and STOVL landing facilities.

- Structure: Fixed-wing and rotary-wing MWSSs are similarly structured with the exeption of arresting gear equipment and personnel in the fixed-wing MWSS.

➢ **Proposed Change:** Beginning in Fiscal Year 2002, commence the phased 5 year realignment of ACE engineering, motor transport, food services and military police functions, equipment and personnel from the MWSG/MWSS to the CSSE.

- Mission / Tasks: The MWSS provides all essential ~~AGS~~ airfield operations requirements to a designated ~~fixed or rotary wing component of an~~ Aviation Combat Element (ACE). ~~and all supporting or attached elements of the Marine Air Control Group (MACG).~~

1. Internal Airfield Communications
2. Weather services
3. Expeditionary airfield services
4. Crash/Fire/Rescue and structural fire fighting services
5. Aircraft and ground refueling
6. ~~Essential engineer services~~
7. Motor transport for operations internal to air base
8. ~~Messing facilities~~
9. Routine and emergency sick call and aviation medical functions
10. Individual and unit training of organic personnel, and selected personnel of support units
11. Organic nuclear, biological and chemical defense
12. ~~Security and law enforcement services~~
13. Air Base Commandant functions

- Preliminary Concept of Employment: The MWSS will provide all aviation-unique airfield operations functions in support of an ACE. The Fixed-Wing MWSS will provide arresting gear capability. The CSSE will provide a task-

organized detachment to perform all MAGTF-common engineer and general support tasks to the ACE.

- ❖ Desired Capability: Ability to operate an airfield in support of an ACE, whether pre-existing, Forwarding Operating Base (FOB), or expeditionary.

- ❖ Structure / Individual MOS Impacts: Structure will migrate from the MWSS to the FSSG and CSSDs. There will be structure savings as a result of reduced numbers of Marines being required due to consolidation.

➢ **Does Proposal Advance OMFTS Capability?** Yes.

➢ **Other MAGTF Element WG Impacts / Position of Other WGs:** The Aviation CSS Migration Plan is an integral part of the Total Force CSS Migration Plan.

➢ **Preliminary DOTES Assessment:**

- ❖ Doctrine: Will require coordinated changes in both aviation and CSS support doctrine (e.g. FMFM 5-1 Aviation Operations, FMFM 2-6 MAGTF Rear Area Operations) as the responsibility for building expeditionary airfields, providing engineer capabilities, motor transport, MPs and food services shifts from the ACE to the CSSE.

- ❖ Organization: Engineering and motor transport MOS's in the MWSS will be drastically reduced. T/E will reflect loss of food services, motor transport and engineering equipment. CSSE will be enlarged by addition of both personnel and equipment previously resident at the MWSS.

- ❖ Training and Education: No impact.

- ❖ Equipment: Transfer of engineering and motor transport assets from MWSS to CSSE. Introduction of RDK is necessary to realize structure savings from MAGTF-wide consolidation of food services.

- ❖ Support and Facilities:

  - Combat service support responsibility will gradually shift from MWSS to CSSE for engineer, motor transport, food services and MP support.

  - Direct Support Group headquarters should be collocated with MWSG headquarters to ensure routine interaction and coordination.

  - Equipment and personnel gained by CSSE should not require expansion in storage facilities and/or living quarters. Because there will be fewer people in the two resulting organizations than currently exist in the MWSS, facilities should be adequate to house CSSD staffs and personnel. This will ensure that MWSS and CSSD staffs interact and coordinate routinely.

- Excess equipment will be migrated to the CSSE for PWR, storage, redistribution, divestiture or sale. Each CSSD will be task organized for its garrison, exercise or combat missions resulting in expansion and contraction of the equipment pool based on tasks.

➢ **Overall Assessment:**

❖ Pros:

- More efficient utilization of common MAGTF assets and capabilities.
- Structure savings and manning increase.
- Firm step in the direction of OMFTS; more fully integrates the elements of the MAGTF and optimizes the ability to task organize at the MEF level.
- Begins the necessary process of developing "trust" among the elements of the MAGTF for implementation of OMFTS *at a time when risk is relatively low.*
- Allows MAGTF elements to concentrate on their specific warfighting capabilities.

❖ Cons:

- The perceived loss of direct control and immediate response for engineering and/or motor transport functions is emotional and often viewed as fundamental to aviation's ability to carry out its expeditionary role.
- There will be "growing pains" both within the ACE and the CSSE as engineering, motor transport, MP and food services functions are realigned to the CSSE. It will require a concerted effort by both the gaining and transferring entities to ensure there is no loss of responsiveness, capability and functionality during the transition.
- Several documents currently specify an organic aviation requirement to be able to construct STOVL expeditionary airfields of less than nine hundred feet. Documents such as T/O&E numbers 8702, Fixed Wing Support Squadron and 8703, Rotary Wing Support Squadron, Task 6.d. (less surface and subsurface preparation) and MAGTF Aviation and Operational Maneuver from the Sea, p.7, "Thus, the ACE must possess an organic capability to establish and operate flexible expeditionary sites ashore, ensuring responsiveness and endurance." p.11, EXPEDITIONARY OPERATIONS: "An ACE organic capability to establish, operate and protect MAGTF Support Sites, which provide a conduit for sustainment," will have to be updated.

➢ **Preconditions for Implementation:**

❖ Working Group chartered by CMC and sponsored by CG, MCCDC convened to plan and implement the Total Force CSS Migration Plan.

- ❖ Introduction of the RDK before food services structure savings can be realized.

- ➢ **Potential "External" Consequences (risk):**

  - ❖ Political: None

  - ❖ OSD: None.

  - ❖ CINC-Relevance: No change.

- ➢ **Future FSPG Follow-on Requirements?** There must be an assessment mechanism to ensure that the engineer and motor transport functions and equipment are migrated to the CSSE in an orderly manner, and that the ACE is supported sufficiently and responsively for mission accomplishment.

- ➢ **QDR Impacts?** None foreseen.

- ➢ **Miscellaneous Historical Data:**

  - ❖ Documents Used:

    - Table of Manpower Requirements, T/O&E numbers 8702, Fixed Wing Support Squadron and 8703, Rotary Wing Support Squadron, dated 9902

    - Marine Corps Bulletin 3125, The Marine Aviation Implementation Plan for FY98

    - "OMFTS Implementation Study (1996-2016), Final Report", Vol. I; "21st Century Warfighting" OMFTS Working Group Final Report, 1999

    - "MAGTF Aviation and Operational Maneuver from the Sea" 1/28/99

  - ❖ Briefs Received:

    - CG, 3d Marine Aircraft Wing

    - CG, 2d Marine Aircraft Wing

    - CO, MWSG-27

    - CWO-5 LaGassa, HQMC (ASL-45), *EAF Overview*

  - ❖ Papers:

    - Marine Wing Support Group/Marine Wing Support Squadron Organizational Analysis for Marine Expeditionary Force (MEF) Combat Service Support (CSS) Review, Report of the MWSG OAG

- Point paper, Proposal to have all engineering support to wing assets provided by CSSE from the FSSG vice a MWSS from the MWSG, by Col. M. W. Blackledge, C.O., MWSG-37, 1 Oct 1998

- Talking paper, Key bullets for MWSG role for MEF CSS Review, by Col. M. W. Blackledge, C.O., MWSG-37

- Naval Mobile Construction Battalions in Support of the USMC.

❖ SMEs Consulted:

- Col. T. J. Williams, former C.O., MWSS
- Col. Matt Blackledge, C.O. MWSG-37
- Col. John Sweet, C.O. MWSG-27
- Col. Norm Jepsen, C.O., MWSG-47
- Col. Rich Houlihan, HQMC, I&L
- Several other former MWSS and combat engineer commanders

❖ Any General Observations:

- Do not recommend reducing the number of MWSS's. Current war plans and garrison airfield operations justify the current number of MWSS's.

- The Aviation CSS Migration Plan points Marine aviation squarely on the road to OMFTS while maintaining the MAGTF's capability to operate from sea bases, expeditionary airfields, forward operating bases and VSTOL pads and FARPs.

➢ Attachments (HYPERLINKS)

X MWSS Attach 1 Migration Personnel.xls

X MWSS Attach 2 TO CSS PLAN.xls

X MWSS Attach 3 FM TO CSS PLAN.xls

X MWSS Attach 4 RW TO CSS PLAN.xls

X MWSS Attach 5 EQUIP.doc

X MWSS Attach 6 2ACE CSS Migration Plan.doc

X MWSS Attach 7 WIRE DIAGRAMS.ppt

"OMFTS necessitates a greater degree of interdependence and cohesion between the elements of the MAGTF than ever before. OMFTS represents a cultural paradigm shift

calling for ever-greater interdependence and closer integration between MAGTF elements. Ground and aviation Marines must immerse themselves in each other's tactics, capabilities and limitations to foster our 'shared vision' and develop 'trust tactics.' This mindset provides an avenue to shed parochial blinders, empowering necessary realignments during our evolution to a new level of expeditionary readiness. Executing OMFTS does not depend on a revolution in technology, but an evolution in ideology. Taken together, the platforms of the 21st Century do not represent sweeping warfare changes and cannot guarantee success in tomorrow's environment. The revolution resides in the ability to integrate, coordinate and execute operations—unlimited by physical boundaries and linear thought and cannot guarantee success in tomorrow's environment. OMFTS epitomizes that revolution."

MAGTF Aviation and Operational Maneuver from the Sea

FSPG-99 Working Group Recommendation

- **Issue:** EXCESS ENGINEER EQUIPMENT

- **Discussion:**

Engineer units have substantially increased major end items. The focus has been on acquiring heavy counter-mobility and survivability assets vice mobility assets. According to CNA analysis, engineer/utility equipment totals doubled between 1988 (total items 6,620) to 1998 (total items 13,204). During the same period engineer maintainers and operators have decreased by 752 fewer maintainers and 381 fewer operators. Yet, holders of excess equipment, identified in the 1998 T/E reviews, are not turning in excess equipment.

It appears that acquisition trends have not changed much over the past 20 years. Initial issue equipment procured for the Fleet Marine Force tends to represent a Cold War mentality. Bigger, heavier and less mobile equipment has been fielded on a one for one replacement plan. Requirements are not well suited to the future battlespace and are not conducive to many types of operations we expect to execute under OMFTS.

Clarifying the picture of how much we have, where it is located and what do we really need is very difficult if not impossible. In PWR alone, the Marine Corps has as much, or in some cases double, the number of engineer end items that are prepositioned onboard an entire MPS squadron (D7G's—32 PWR, 17 MPS; Forklift 10K's—61 PWR, 37 MPS; Scraper's—6 PWR, 4 MPS). In 15 to 20 years, the replacement cost for current on-hand engineer equipment will be over a billion dollars, a bill that the Marine Corps can not afford.

Some progress has been made in adopting new processes and procedures for the development of AAO's for new equipment. An example, in the MCCDC Draft AAO Manual, is the replacement of the ROWPU on MPS that describes a capability based procurement and distribution strategy vice a one for one replacement. If the current ROWPU produces X amount of water per hour and the new ROWPU produces 2X then we can reduce the number of ROWPU's on MPS. However, there is agreement among requirement/procurement action officers and FMF representatives that the processes and procedures for the initial issue to operational forces, the largest and most costly procurements, lack the analytical rigor described for MPS and NALMEB allowances. The consensus among these action officers is that FMF AAO recommendations are unconstrained and unchallenged. In another example, each FSSG maintains 30 to 60 percent more MEP generators than required to support a MEF. Moreover, technological changes have caused the Marine Corps to become more reliant on MEP than ever before, but in smaller kilowatt ratings. Large generators (30kw to 100kw) are routinely used to power everything from coffeepots to missile sites, but at only 10% to 40% of their available power. The MAGTF must have the right equipment for the right job. Past policy regarding level 2-4 generator

holders (MAGTF MEP safety stocks) has caused a proliferation of electrical power that has led to two significant problems: amount of generators and readiness. There are currently 163 100kw, 477 60kw, 712 30kw and 981 10kw generators in the Marine Corps. MEP studies confirm that these numbers represent several times the generating capacity required by the Marine Corps. This is especially true in 60kw and 100kw generators.

The "road map" for transitioning from today's Corps to an OMFTS capable force is not institutionalized in the AAO process. All existing and future acquisition programs must be judged and validated against OMFTS attributes and capability requirements. Specific standards and eligibility criteria should be a defining part of AAO development for initial issue. The uncontrolled, unchallenged and undisciplined procurement of equipment throughout the MAGTF has a negative impact on the mobility of units—thus impact on our ability to conduct OMFTS. Likewise, excess engineer equipment consumes valuable storage/shipping space, impacts O&M funding through increased maintenance demand and increases the equipment to personnel ratio. Several hundred pieces of engineer equipment, identified in the FSPG CSS migration plan, will have to be closely reviewed to determine how much of this equipment is to be realigned, migrated, or divested. In addition, Marine planners must leverage and include the vast capabilities of the Naval Mobile Construction Battalion in right sizing the Corps.

- **Recommendation:** Direct CG MCCDC to conduct an in-depth T/E review of all units (active and reserve) holding engineer and utility equipment. This review should include a thorough revalidation of Marine Corps MEP policy and a comprehensive evaluation of engineer requirements. In addition, this review should address strategies for the realignment, migration, or divestiture of current excess engineer equipment to right size the MAGTF. More importantly for the future, the AAO process must focus on our operational needs for OMFTS.

FSPG Working Group Worksheet

- **Topic:** ARTILLERY REGIMENT MOTOR TRANSPORT AND ENGINEER CAPABILITIES

- **Issue:** General engineer and motor transport capability resides in the Artillery Regiment of the Marine Division. In order to eliminate duplication and improve efficiency, selected general engineer and motor transport capability should migrate from the Artillery Regiment to the CEB and FSSG.

  - Guidance: Draft OMFTS working group final report recommended consolidation and elimination of redundancies.

  - Background/Discussion:

    - There is a vast amount of general engineering, mobile electric power, and other engineer equipment spread throughout the Marine Division (Artillery, Combat Engineers) and the FSSG (Engineer Support, Landing Support Battalion). In many cases, there may be duplicate structures throughout the MEF that must maintain and support this engineer equipment. In some cases, this equipment is not frequently used for daily operations or deployments, but rather is retained within the unit for years to be available for use in event of deployment to an MTW. If we can clearly identify equipment excesses or duplication as candidates for consolidation/migration, we believe that this could lead to greater efficiency across the MEF. Our goal is to build units around core competencies and, where possible, centralize CSS functions under the FSSG. While certain engineer capabilities must be retained in the Division, we envision that engineer capabilities can be provided by optimizing the concept of task organization at the MEF level.

    - Previously, the Artillery Regiment required medium lift trucks to move meteorological data systems, which are now loaded onto HMMWVs. Additionally, changes in the configuration of the command and control equipment has reduced the size of the equipment, which is now also carried by HMMWVs. Therefore, medium lift assets can be decreased in the Artillery Regiment.

    - Capability Deficiency:

      - Significant general engineer capability has incrementally been increased beyond that which is required.

      - Inadequate organic mobility to maneuver with ground forces.

      - Large logistical footprint.

- › Excess assets not required for combat support.

- Capability Desired:

  - › Effective, efficient, and responsive mobility.

  - › Reduce footprint, eliminate duplication, and reorganize assets necessary to enhance OMFTS.

➢ **Current Organization:**

- ❖ Mission / Tasks: To provide the Regimental Commander with the means for effective command and control of the Artillery Headquarters; as well as administrative and logistical support for the Headquarters Battery. This battery detaches survey (up to a 3d order capability), engineer, counter-battery radar, artillery electronics maintenance, and meteorological sections in support of subordinate elements.

- ❖ Capability: Capable of organizational maintenance (1ST echelon) of all organic equipment and organizational maintenance (2^{ND} echelon) of communications/electronics, ordnance, motor transport and engineer equipment. General purpose vehicles provide transportation for command and control, communications equipment, limited medical evacuation, internal supply distribution, counter-battery radar, and meteorological systems. Additionally, special purpose vehicles are provided for transportation of heavy engineer equipment and artillery electronics maintenance shelters.

- ❖ Structure: The following are the current structures involved in this proposal:

  T/O 1101H, Engineer Equipment Platoon is 1 OFF/41 ENL.

  T/O 1101H, Motor transport Section is 0 Off/48 ENL.

  T/O 1101N, Motor transport Section is 0 Off/25 ENL.

➢ **Proposed Change:**

- ❖ Mission /Tasks: Current mission does not change, but there will be a reduced utility and engineer capability. In transportation subparagraph delete, "additionally, special purpose vehicles are provided for transportation of heavy engineer equipment and artillery electronics shelters."

- ❖ Preliminary Concept of Employment: General engineering and CSS would be requested from, and provided by, the FSSG. In some cases, combat support engineer capability could be provided by the Combat Engineer Battalion.

- Desired Capability: Reduce duplication and eliminate unnecessary CSS capabilities within the Artillery Regiment. Specifically, reduce general engineer, utility, and motor transport equipment from the T/E N2101 and N2301:

ENGINEER/DELETED QUANTITIES/TAM/NOMENCLATURE
(T/E N2101 x 2)

-2 B0605 DISTRIBUTION SYTEM, 100 KW
-7 B1280 LIGHT SET
-9 B1645 REFRIGERATOR UNIT
-9 B1710 REFRIGERATOR UNIT
-31 B2130 TANK, FABRIC WATER
-6 B2460 TRACTOR, FT W/ANGLE BLADE
-6 B2462 TRACTOR, D7G
-4 B2464 TRACTOR, FT, MC1150 (TWO TO BE Migrated TO CEB T/E N1310 x 2)

MOTOR T/DELETED QUANTITIES/TAM/NOMENCLATURE
(T/E N2101 x 2)

-10 D0209 POWER UNIT FRONT MK48
(MIGRATE 6 TO FSSG, 4 AVAIL FOR REALLOCATION)
-5 D0235 SEMI-TRLR, LOWBED, 40T
(MIGRATE 3 TO FSSG; 2 TO T/E N1310 COMBAT ENGR BN)
-1 D0478 KIT TOOL LVS
(MIGRATE 1 TO FSSG)
-5 D0876 TRLR, POWERED MK 14
(5 AVAIL FOR REALLOCATION)
-1 D0877 TRLR, POWERED MK 15
(MIGRATE 1 TO FSSG)
-5 D0878 TRLR, POWERED MK 16
(MIGRATE 3 TO FSSG; 2 TO T/E N1310 CMBT ENGR BN)
-1 D0879 TRLR, POWERED MK 17
(1 AVAIL FOR REALLOCATION)
-36 D1059 TRK, CARGO, 5T
(MIGRATE 16 TO T/E N1310 COMBAT ENGINEER BATTALION, 20 AVAIL FOR REALLOCATION x 2)

MOTOR T/DELETED QUANTITIES/TAM/NOMENCLATURE
(T/E N2301 x 1)

-7 D0209 POWER UIT FRONT MK48
(MIGRATE 4 TO FSSG, 3 AVAIL FOR REALLOCATION)
-3 D0235 SEMI-TRLR, LOWBED, 40T
(MIGRATE 3 TO FSSG)
-1 D0478 KIT TOOL LVS
(MIGRATE 1 TO FSSG)
-4 D0876 TRLR, POWERED MK 14

(4 AVAIL FOR REALLOCATION)
-1 D0877 TRLR, POWERED MK 15
(MIGRATE 1 TO FSSG)
-3 D0878 TRLR, POWERED MK 16
(MIGRATE 3 TO FSSG)
-1 D0879 TRLR, POWERED MK 17
(1 AVAIL FOR REALLOCATION)
-44 D1059 TRK, CARGO, 5T
(44 AVAIL FOR REALLOCATION)

- Structure/Individual MOS Impacts: The following changes to T/O 1101H AND 1101N are recommended:

ENGINEER EQUIPMENT PLATOON (T/O 1101H)
LINE NO./DESCRIPTION/GRADE/MOS/ENL
206A/HYGIENE EQUIP MECH/LCPL/1171/REDUCE FROM 1 TO 0
209/ELECT EQUIP REPAIR/ LCPL/1142/REDUCE FROM 6 TO 4
213/ENGR EQUIP MECH/PFC/1341/REDUCE FROM 6 TO 4
214/ENGR EQUIP OPR/SSGT/1345/REDUCE FROM 1 TO 0
215/ENGR EQUIP OPR/SGT/1345/REDUCE FROM 3 TO 1
216/ENGR EQUIP OPR/CPL/1345/REDUCE FROM 3 TO 0
217/ENGR EQUIP OP/LCPL/1345/REDUCE FROM 9 TO 8
NEW SECTION TOTAL: 1 OFF/29 ENL
TOTAL REDUCTION OF 12 ENL BY MOS:
1 ENL-1171 MOS
2 ENL-1142 MOS
2 ENL-1341 MOS
7 ENL-1345 MOS
NOTE: TOTAL STRUCTURE SAVINGS OF 24(12 ENL X 2)

MOTOR TRANSPORT/DELETED QUANTITIES/TAM/NOMENCLATURE (T/O 1101H)
LINE NO./DESCRIPTION/GRADE/MOS/ENL
192/WRECKER OPR/CPL/3536/REDUCE FROM 2 TO 0
198/TRAC TRLR DRIVER/3533/REDUCE FROM 1 TO 0
198A/TRAC TRLR DRIVER/3533/REDUCE FROM 1 TO 0
200/TRAC TRLR DRIVER/3533/REDUCE FROM 7 TO 0
NEW SECTION TOTAL 0 OFF/37 ENL
TOTAL REDUCTION OF 11 ENL BY MOS:
2 ENL-3536 MOS
9 ENL-3533 MOS
NOTE:STRUCTURE MIGRATES TO FSSG 22 ENL(11 ENL X 2)

MOTOR TRANSPORT/DELETED QUANTITIES/TAM/NOMENCLATURE (T/O 1101N)
LINE NO./DESCRIPTION/GRADE/MOS/ENL

198/TRAC TRLR DRIVER/SGT/3533/REDUCE FROM 1 TO 0
198A/TRAC TRLR DRIVER/LCPL/3533/REDUCE FROM 1 TO 0
200/TRAC TRLR DRIVER/LCPL/3533/REDUCE FROM 1 TO 0
NEW SECTION TOTAL 0 OFF/22
TOTAL REDUCTION OF 3 ENL BY MOS:
3 ENL-3533 MOS
NOTE: STRUCTURE MIGRATES TO FSSG 6 ENL(3 ENL X 2)

- Summary of structure savings and migration:
  - Deleted 0 OFF/24 ENL (STRUCTURE SAVINGS) from 10th/11th Marines.
  - Migrated 0 OFF/11 ENL from 10th Marines to 2nd FSSG, 0 OFF/11 ENL from 11th Marines to 1st FSSG, and 0 OFF/3 ENL from 12th Marines to 3rd FSSG.

- **Does Proposal Advance OMFTS Capability?** Yes.
  - The Regiment is lighter.
  - Increases mobility by removing cumbersome engineer equipment.
  - Reduces duplication among Combat Engineer Battalion, Engineer Support Battalion and Naval Construction Battalion.
  - Reduces logistical footprint.
  - Eliminates excess capacity.

- **Other MAGTF Element WG Impacts / Position of Other WGs**: None.

- **Preliminary DOTES Assessment:**
  - Doctrine: Will require changes in CSS and artillery doctrine.
  - Organization: Minor changes to Platoons and Sections have been made within T/O 1101H AND 1101N, HQ BATTERY.
  - Training and Education: No impact.
  - Equipment: The list of engineer and motor transport equipment, available for migration or reallocation has been identified. There are two B2462'S that must be migrated from T/E N2101 to the two Combat Engineer Battalions T/E N1310.
  - Support and Facilities: No impact.

- **Overall Assessment:**
  - Pros:

- Moves non-core capabilities to appropriate organizations and units.
- Focuses on primary missions.
- T/E changes provide for battlefield mobility.
- Reduces wheeled vehicles and general engineer equipment while increasing overall mobility.
- Total 0 OFF/24 ENL billets (engineer) eliminated (T/O 1101H) as structure savings.

❖ Cons: Increased external coordination requirements with Combat Engineer Battalion, Marine Division and Engineer Support Battalion, FSSG by eliminating utility support and reducing general engineering capability.

➢ **Preconditions for Implementation:** Migration or reallocation of motor transport assets will be done within the timeline of the CSS Migration Plan.

➢ **Potential "External" Consequences (risk):**

❖ Political: None.

❖ OSD: None.

❖ CINC-Relevance: None.

➢ **Future FSPG Follow-on Requirements?** Future maintenance and supply initiatives will have a significant impact on GCE units. Follow-on initiatives and actions that will further reduce duplication and eliminate unnecessary equipment capabilities should be reviewed during the next FSPG. Actions regarding the strategy for new equipment and ammunition will require a critical and careful look as the Corps moves closer to OMFTS.

➢ **QDR Impacts?** None

➢ **Miscellaneous Historical Data:**

❖ Documents Used:

- T/O 1101H
- T/O 1101N
- T/E N2101
- T/E N2301
- T/E 1310

- Briefs Received: None.
- Papers: None.
- SMEs Consulted:
  - Former Artillery Battalion Commanding Officers
  - Former Commanding Officer, CEB
  - Current Commanding Officer, CEB
  - Former MWSS Commanding Officer
  - Division Engineer Officer
  - FSSG Engineer Officer
  - MARFORRES Engineer Officer.
- Any General Observations: None.

- **Attachments (HYPERLINKS)**

CSSE\ARTY ENG\X ArtyMT_Engr_MIGPLAN_ATCH.xls

CSSE\ARTY ENG\X ARTYMT_EngrEquip_ATCH.doc